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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/714,747	11/16/2000	Andrew J. Hazelton		5191

7590 05/01/2003
Steven G Roeder
5560 Chelsea Avenue
San Diego, CA 92037

EXAMINER

ESPLIN, DAVID B

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 05/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/714,747

Applicant(s)

HAZELTON ET AL.

Examiner

D. Ben Esplin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12, 20, 23, 28-36, 47, 52, 53, 57-63, 80-82 and 90-247 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) See Continuation Sheet is/are allowed.
- 6) ☒ Claim(s) 35, 36, 129, 130, 161, 162, 184, 185, 204, 205, 229 and 230 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Continuation of Disposition of Claims: Claims allowed are 12,20,23,28-34,47,52,53,57-63,80-82,90-128,131-160,163-183,186-203,206-228 and 231-247.

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DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 35 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 35 and 36 depend from cancelled claim 1, making the subject matter of these claims unclear. Since Applicant does not list these claims in the Arguments section as claims still pending in this case Examiner assumes that Applicant had intended to cancel these claims and accordingly these claims are not addressed further on their merits in this Office Action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C.

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122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 129, 130, 161, 162, 184, 185, 204, 205, 229, and 230 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,408,045 to Matsui et al.

FIG. 1 of Matsui shows a stage assembly adapted to move a device relative to a stage base including, a stage (main stage 5), a stage mover assembly (linear motors 51 and 54) for moving the stage with two degrees of freedom, and a reaction mass assembly (Y mass members 23 and X mass members 27) adapted to reduce the reaction forces in two degrees of freedom that are transferred to the stage base. The two degrees of freedom in which the stage is driven and the reaction forces are reduced are along an X axis and a Y axis. The reaction mass assembly includes an X component made up of a first X reaction mass and a second X reaction mass, and moves along the X axis on X mass guides 28 as a result of the stage being driven along the X axis. When the stage is driven along the Y axis a Y component of the reaction mass system, including a first Y reaction mass and a second Y reaction mass, is also moved along the Y axis to cancel reaction forces in the Y direction. The X component of the reaction mass assembly is also carried along the Y axis as the stage is driven in the Y direction. The X component includes a reaction mass mover assembly, which is not shown in the drawing, for adjusting the position of the reaction mass assembly relative to the stage base along the X axis (col. 5 lines 59-67). The Y component likewise includes a reaction mass mover assembly for adjusting the position of the reaction mass assembly (air cylinder 35 and pistons 31 and 33).

These claims are considered to be product-by-process claims and therefore, although a process is defined by these claims, the product of this process must shown to be structurally

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distinguishable from the product of a prior art process (see MPEP section 2113). Since the stage apparatus of Matsui is intended to cancel out reaction forces in a lithography apparatus during the exposure of semiconductor wafers (see col. 1 lines 6-13), the devices manufactured using the stage apparatus and method of Matsui would be identical to the devices and wafers of these claims.

Allowable Subject Matter

Claims 12, 20, 23, 28-34, 47, 52, 53, 57-63, 80-82, 90-128, 131-160, 163-183, 186-203, 206-228, and 231-247 are allowed.

The following is an examiner's statement of reasons for allowance:

Referring to claims 20, 23, 28-34, 52, 53, 90-93, 95, and 98-128, a stage apparatus including a reaction mass assembly with an X mass component, as defined by these claims, and a Y mass component, as defined by these claims, that move concurrently in the same direction to correct reaction forces in the stage apparatus, along with the rest of the structure and function of these claims is not found in the prior art.

Regarding claims 12, 94, 131-160, and 231-247, a stage apparatus including a reaction mass assembly with an X mass component, as defined by these claims, and a Y mass component, as defined by these claims, wherein the X and/or Y mass component is movable around a Z axis perpendicular to both the X and Y axis, in conjunction with the rest of the limitations of these claims, is not suggested in the prior art.

In reference to claims 96 and 163-183, a stage apparatus including a reaction mass assembly with an X mass component, as defined by these claims, and a Y mass component that

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includes a planar shaped reaction mass base portion, as further defined by these claims, is not taught in the prior art.

Further, referring to claims 206-228, a stage apparatus including a reaction mass assembly with an X mass component, as defined by these claims, and a Y mass component, as defined by these claims and supporting at least a portion of the X mass component, is not disclosed in the prior art.

Still further, referring to claims 57-63, 97, and 186-203, a stage apparatus including a reaction mass assembly with an X mass component, as defined by these claims, and a Y mass component as defined by these claims including a reaction frame as described in these claims and the specification, is not found in the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

Applicant's arguments filed 2/20/03 concerning claims 12, 20, 23, 47, 52, 53, and 80-82 have been considered and found to be persuasive. Consequently the previously made rejection of these claims is withdrawn.

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Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Ben Esplin whose telephone number is (703) 305-4022. The examiner can normally be reached on Mon.-Fri. (8am-4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell E. Adams can be reached on (703) 308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



DBE

April 29, 2003